Amendments to the Specification:

Please replace paragraph 20 with the following amended paragraph:

> Yet another embodiment of the above elements includes the provision for active mechanical and/or electrical actuation of the gas/fluid channels (see above and the drawings of Fig. 6 which includes a conductive connection 601 from the device layer to the handle layer). The channels can be moved into and away from the tip platform, to act as a clamp or release on the primary cantilever tip platform. Arm motion may be accomplished by one or more independent thermal actuators (see Fig. 6), electrostatic actuators, or piezoelectric actuators. Fluid channel arms f101c are free and released down to the base near the check valves. The arms f101c may be moved mechanically to stop against the handle layer or cam themselves onto the device layer or the center member may be heated by passing a current through handle layer and the center member. The arms may be used to stiffen or immobilize the tip bearing cantilever without the presence or aid of secondary cantilevers or beams behind the primary cantilever.

Please add the following new paragraph after paragraph 12:

> Fig. 5 illustrates a cantilever configured with valves for gas flow in accordance with an aspect of the present invention. The cantilever includes a channel cover 501 which is about 10 - 20 microns thick. The cover is configured with intake holes 503 over intake valves 513a. The device layer portion of the cantilever shows primary cantilever flexible fluid channels with thermal actuator 511. The device layer includes intake check valves 513a and outflow check valves 513b. A handle layer 521 shows a cutout with beam support (instead of secondary cantilevers). The handle layer includes fluid passages 522 to the two fluid chambers. Handle cavities 531 are shown with intake ports 532a and outflow ports 532b. An overhead view is shown of one of two flapper inserts placed or bonded into the main cantilever body handle cavity. The cavity is about 400 microns deeps as is the insert. A side view shows flapper end walls (dotted lines) of the flapper assembly ready to be inserted into the cantilever handle cavity. Assembly is made from 400 micron SOI 1-0-0 silicon with a 200 micron device and 200 micron handle layers.

Amendments to the Drawings:

The attached sheets of drawings includes changes to Figs. 5 and 6. These sheets, which include Figs. 5 and 6 replace the original sheets including Figs. 5 and 6.

Text in Figs. 5 an d6 that were deemed "excessive" has been replaced with reference numerals. The text has been incorporated into the specification.

As to Fig. 5, all the reference numerals shown have been added, along with their corresponding tag lines. Substantially all of the text appearing in Fig. 5 as originally filed has been deleted from the figure and incorporated into the specification as a new paragraph inserted after paragraph number 12 of the specification as filed.

As to Fig. 6, reference numeral 601 has bee added, along with its corresponding tag line. Much of the text appearing if Fig. 6 as originally filed (including the text corresponding to reference numeral 601) has been deleted from the figure and incorporated into paragraph number 20.

Attachment: Replacement Sheets